UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,925	12/26/2001	Luc Beaudoin	00430-0009	7638

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EXAMINER
TAN, ALVIN H

ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/025,925	BEAUDOIN ET AL.
	Examiner	Art Unit	
	Alvin H. Tan	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 September 2005_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _21-46_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _21-46_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _22 September 2005_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Remarks

1.   Claims 21-46 have been examined and rejected. This Office action is responsive to the amendment filed on 9/22/05 which has been entered in the above identified application.

Drawings

2.   The corrections to the drawings were received on 9/22/05. These drawings are accepted and the objection to the drawings is withdrawn.

Specification

3.   The corrections to the specification have been approved, and the objections to the specification are withdrawn.

Claim Objections

4.   The corrections to the claims have been approved, and the objections to the claims are withdrawn.

Claim Rejections - 35 USC § 112

5.   The corrections to claims 26, 24, 41, 42, and 46 have been approved, and the rejections to the claims are withdrawn.

Claim Rejections - 35 USC § 101

6.   The corrections to the claims 21-34 and 44-46 have been approved, and the

rejection to the claims are withdrawn.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 21-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker

et al (March 1995).

Claims 21-34

8-1.   Regarding claim 21, Becker anticipates the claim of a method comprising the

steps of presenting a background image representation of at least a first of the aspects

of the telecommunication network and presenting a foreground representation of at

least a second of the aspects of the telecommunication network over the background

image representation, by teaching a graphical tool called SeeNet, that visualizes

network data using static displays, interactive controls, and animation *[Section I, page*

16, paragraph 7, lines 1-3]. [Figure 7] shows the percentage of idle network capacity

into and out of one node near Chicago using SeeNet. As shown, a map of the U.S is

displayed in the background. In addition, links with a high percentage of idle capacity

(red) are shown above those with a lower percentage of idle capacity. Hence, the higher

percentage links are shown in the foreground, and the lower percentage ones, in the

background. The user is allowed to adjust the colors representing the links on the

display and thus, would have the ability to choose which links would be in the

foreground *[Section III, page 20, paragraph 4]*.

8-2.   Regarding claim 22, Becker anticipates the claim of the method wherein the

background image representation is generated from an information set associated with

the telecommunication network such that the background image representation contains

less than a complete visual representation of the telecommunications network topology,

by teaching that the background links only represent a portion of the network data that

fall within a certain range, as shown by its color *[figure 7]*.

8-3.   Regarding claim 23, Becker anticipates the claim of the method wherein the

background image representation is a combination of a plurality of unselected views of

the telecommunication network and wherein the foreground image representation is at

least one selected views of the telecommunication network, by teaching that the

background map and links represent the background views and the links having the

prominent user selected color represent the foreground view.

8-4.   Regarding claim 24, Becker anticipates the claim of the method wherein the step of presenting the foreground image representation comprises displaying the at least one selected view in a distinguishable fashion from the combination of unselected network views forming the background image representation to enable the at least one selected view of the telecommunication network to be viewed in context of information contained in the background image representation, by teaching that the foreground links have a distinct color. In the case of [figure 7], the color is red.

8-5.   Regarding claim 25, Becker anticipates the claim of the method further comprising the step of moving at least one of the unselected views of the telecommunication network from at least one of the background image representation to the foreground image representation, and the step of moving at least one of the selected views of the telecommunication network from the foreground image representation to the background image representation, by teaching that the user can adjust the color as well as the levels of color being displayed [Section III, pages 19-20]. This would allow the user to modify which links are in the background and foreground.

8-6.   Regarding claim 26, Becker anticipates the method wherein the step of moving is performed upon receipt of input from a user of a network management tool, by teaching that SeeNet allows a user to modify the parameters while continuously providing visual feedback, enabling the adjustment of the parameters to produce informative displays [Section IV, paragraph 1].

8-7.   Regarding claim 27, Becker anticipates the method wherein the background

image representation is a reference view of a base model representation and wherein

the foreground image representation is an overlay view of the base model

representation, by teaching that the map is a reference view and the links are overlaid

on top of the map *[figure 7]*.

8-8.   Regarding claim 28, Becker anticipates the method wherein the background

image representation is grayed out relative to the foreground image representation, by

teaching that the links having the lowest percentage of idle capacity in *[figure 7]* are

shown in gray.

8-9.   Regarding claim 29, Becker anticipates the claim of the method wherein the first

aspect is a physical network topology and the second aspect is a logical network

topology, by teaching that the display contains links and nodes on a map *[figure 7]*.

8-10.   Regarding claim 30, Becker anticipates the claim of the method wherein the

background image representation and foreground image representation allow

simultaneous displays of representations of multiple network technologies available on

the telecommunication network, by teaching a statistic may be raw data or summaries.

Link statistics may be directed, as in call flow of a circuit-switched network, or

undirected, as in the network's capacity *[Section I, page 16, paragraph 4]*.

8-11. Regarding claim 31, Becker anticipates the claim of the method further comprising the step of enabling a combination of the background and foreground images to be visible via a Graphical User Interface (GUI) of a network management tool *[figure 7]*.

8-12. Regarding claim 32, Becker anticipates the claim of the method wherein the first aspects and second aspect are user selectable from the plurality of aspects of the telecommunication network via the GUI, by teaching that the user may vary the statistic, levels, geography, topography, time, aggregation, and color parameters of the display *[Section III, page 19-20]*.

8-13. Regarding claim 33, Becker anticipates the claim of the method wherein the first aspect represents physical devices in the telecommunication network and wherein the second aspect represents attributes of the physical devices, by teaching the topology parameter *[Section III, page 19]* and that network data may be categorical, such as the type of node or link, or quantitative, such as a link's capacity *[Section I, page 16, paragraph 4]*.

8-14. Regarding claim 34, Becker anticipates the claim of the method wherein the foreground image representation is a composite of multiple individual representation of one or more of the aspects of the telecommunication network, by teaching that the

display shows multiple nodes on a map with links interconnecting them *[figure 7]*. The

multiple nodes represent the one or more aspects of the telecommunication network.

Claims 35-42

8-15.   Regarding claim 35, Becker anticipates the claim of a network management tool

comprising a Graphical User Interface available via a window on a display, said user

interface being configured to provide the network manager with an ability to

simultaneously display a reference view of a managed telecommunication network and

an overlay view of the managed telecommunication network in a distinguishable fashion

in said window, by teaching a graphical tool called SeeNet, that visualizes network data

using static displays, interactive controls, and animation *[Section I, page 16, paragraph*

7, lines 1-3]. *[Figure 7]* shows the percentage of idle network capacity into and out of

one node near Chicago using SeeNet. As shown, a map of the U.S is displayed in the

background. In addition, links with a high percentage of idle capacity (red) are shown

above those with a lower percentage of idle capacity. The links with the higher

percentage are overlaid on top of the map as well as the links with the lower capacity.

The user has the ability to adjust which links are displayed by varying the parameters

[Section III, pages 19-20].

8-16.   Regarding claim 36, Becker anticipates the claim of the tool wherein the

reference view and overlay view together comprise a plurality of user selectable aspects

of the managed telecommunication network, and wherein the GUI is configured such

that the user may choose which aspects should be used to generate at least one of the

reference view and the overlay view, by teaching that the user may vary the display by

choosing the static, levels, geography, topography, time, aggregation, and color

[Section III, pages 19-20].

8-17.   Regarding claim 37, Becker anticipates the claim of the tool wherein the overlay

view is displayed in relief relative to the reference view, by teaching that the user may

vary the color and thickness of lines *[Section III, page 20, "Size"].* Thus, the links would

show up in relief to the reference view *[figure 7].*

8-18.   Regarding claim 38, Becker anticipates the claim of the tool wherein the

reference view is a view of a base model representation of a network layout containing

information about network devices and attributes of the network devices, by teaching

that the color may be used to encode statistic values on the display *[Section III, page

20, "Color"].* The base model representation may be the links that contain only certain

attributes or that may be in a certain geographical location. Thus, the reference view

contains information and attributes of the network devices represented by the nodes.

8-19.   Regarding claims 39-41, Becker anticipates the claim of the tool wherein the

base model representation is generated from a network information set containing

complete information about the underlying telecommunication network, because the

base information set would inherently need to be complete, in the sense that it contains

all the information necessary to display all the variations based on the parameters

selected, in order to allow for the modification on each parameter within the display.

Becker anticipates the claim of the tool wherein the base model representation

represents less than all of the information contained in the network information set, by

teaching that the user can modify the statistics, levels, geography, topography, time,

aggregation, and color to change the display *[Section III, pages 19-20]*.

8-20.   Regarding claim 42, Becker anticipates the claim of the tool wherein the network

information set comprises physical topography information associated with network

elements on the telecommunication network, by teaching topography as one of the

parameters *[Section III, page 19, "Geography/Topology"]*.

Becker anticipates the network information set comprising logical interconnection

information, status information, and performance attributes associated with the

telecommunication network, by teaching that the links on the map represent a statistic

being displayed *[figure 7]*. Statistics may be raw data or summaries. Link statistics may

be directed, as in call flow of a circuit-switched network, or undirected, as in the

network's capacity *[Section I, page 16, paragraph 4]*.

Claims 44, 46

8-21.   Regarding claim 44, Becker anticipates the claim of the method for presenting a

visual representation of a telecommunication network layout comprising the step of

obtaining an information set containing information relevant to the telecommunication

network layout, because the base information set would inherently need to contain all

the information necessary to display all the variations based on the parameters

selected, in order to allow for the modification on each parameter within the display.

Becker anticipates the method comprising the step of generating a

representation of at least a portion of the information set, said representation having a

background image portion indicative of at least a first aspect of the telecommunication

network layout, said background image being derived from at least a first data subset of

the information set, and said representation having a foreground image indicative of at

least a second aspect of the telecommunication network layout, said foreground image

being user-selectable and derived from at least a second data subset of the information

set, by teaching a graphical tool called SeeNet, that visualizes network data using static

displays, interactive controls, and animation *[Section I, page 16, paragraph 7, lines 1-3]*.

[Figure 7] shows the percentage of idle network capacity into and out of one node near

Chicago using SeeNet. As shown, a map of the U.S is displayed in the background. In

addition, links with a high percentage of idle capacity (red) are shown above those with

a lower percentage of idle capacity. Hence, the higher percentage links are shown in

the foreground, and the lower percentage ones, in the background. The user is allowed

to adjust the colors representing the links on the display and thus, would have the ability

to choose which links would be in the foreground *[Section III, page 20, paragraph 4]*.

8-22. Regarding claim 46, Becker anticipates the claim of the method wherein at least

one of the first and second data subsets are user selectable to enable a user to control

the appearance of at least one of the foreground image and background image, by

teaching that the user may vary the statistic, levels, geography, topography, time,

aggregation, and color parameters of the display *[Section III, page 19-20]*. By varying

these parameters, the user can control which links are shown in the foreground and

which are shown in the background.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker

et al (March 1995) and Bishop et al (U.S. Patent No. 5,729,250).

10-1.   Regarding claim 43, Becker teaches the invention substantially as claimed. See

section 8-15. Becker teaches the claim of a network management tool comprising a

Graphical User Interface available via a window on a display, said user interface being

configured to provide the network manager with an ability to simultaneously display a

reference view of a managed telecommunication network and an overlay view of the

managed telecommunication network in a distinguishable fashion in said window, by

teaching a graphical tool called SeeNet, that visualizes network data using static

displays, interactive controls, and animation *[Section I, page 16, paragraph 7, lines 1-3]*. *[Figure 7]* shows the percentage of idle network capacity into and out of one node near Chicago using SeeNet. As shown, a map of the U.S is displayed in the background. In addition, links with a high percentage of idle capacity (red) are shown above those with a lower percentage of idle capacity. The links with the higher percentage are overlaid on top of the map as well as the links with the lower capacity. The user has the ability to adjust which links are displayed by varying the parameters *[Section III, pages 19-20]*.

Becker does not expressly teach using a display that is touch sensitive and acts as an input device. Bishop teaches that an advantage of a touch screen is that an operator may simply touch a display object or portion of the display screen to select, highlight, or otherwise input information *[column 1, lines 30-33]*. Thus, no intermediate device such as a mouse is required.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include in the graphical tool of Becker, the touch sensitive display as taught by Bishop. This would allow the operator to simply touch a display object or portion of the display screen to select, highlight, or otherwise input information and thus, eliminating the need for an intermediate device such as a mouse.

11.   Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Becker et al (March 1995) and Cox et al (November 1996).

11-1.   Regarding claim 45, Becker teaches the invention substantially as claimed. See

section 8-21. Becker further teaches that the user may vary the color of links to highlight

important data (Section III, page 20, "Color"). Becker does not expressly teach the claim

of the method wherein the background image is presented in a dilute color format and

wherein the foreground image is presented in a saturated color format. Cox teaches a

similar graphical tool for displaying a network layout that positions nodes geographically

on a globe and draws lines or arcs among them *[section 2.1, paragraph 1, lines 1-2]*.

"The color and thickness of lines may be used to represent the traffic, with the thicker

and brighter lines showing the links carrying the most traffic, with the greatest capacity,

and so forth" *[section 1, paragraph 7, lines 6-9]*. Thus, the lines between the nodes that

carry little traffic may be represented by a dilute color and the lines that carry a lot of

traffic may be represented by a more saturated color.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to include in the graphical tool of Becker, being able to modify the

brightness of the colors representing the links, as taught by Cox. This would allow the

user to better represent the statistic being shown in the network display.

Conclusion

12.   The prior art made of record on attached form PTO-892 and not relied upon is

considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R §

111(c) to consider these references fully when responding to this action. The

documents cited therein teach similar systems for representing network topology.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to <u>Alvin H. Tan</u> whose telephone number is <u>571-272-8595</u>. The examiner can normally be reached on Mon-Thu 8:30-6 and alternating Fridays 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on 571-272-4048. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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